REMARKS

Applicants' attorney thanks the Examiner for her comments. Independent Claims 1 and 10 have been amended to incorporate the limitations of previous Claim 2, which has been canceled. Independent Claims 1, 10, 20 and 28 have been amended to recite a Markush group for the mammalian substance. The claimed Markush group is supported on page 2, lines 8-13 of the specification, and does not include the hydrogen ion or ion aggregate. Claims 3 and 4 have been amended to depend directly from Claim 1.

a) Claim Rejections Based on 35 U.S.C. §112

The Examiner rejected Claims 1-28 under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is respectfully traversed.

Applicants are entitled to claims as broad as the prior art and the Applicants' specification will allow. In Re Rasmussen, 650 F.2d 1212, 211 USPQ 323 (CCPA, 1981). The breadth of a claim is not to be equated with indefiniteness. In Re Miller, 441 F.2d 689, 169 USPQ 597 (CCPA, 1971). When the scope of the claimed subject matter is clear, and Applicants have not indicated that the invention is of a different scope than defined in the claims, then the claims comply with 35 U.S.C. §112, second paragraph.

With respect to Claims 1-28, the Examiner indicated that it is unclear what type of chemical detection system is on the substrate. The independent Claims 1, 10, 20 and 28 state that the chemical detection system comprises a first chemical composition on a first sub-area, a second chemical composition on a second sub-area, and (where applicable) a third chemical composition on a third sub-area. Each chemical composition detects different level of a mammalian substance. Various types of chemical compositions are described in the specification (see p.4 line 16 – p.13 line 17). Thus, the scope of the claims is clear, and there is no indication that the invention is of a different scope than defined in the claims.

With respect to Claims 1-9 and 20-27, the Examiner indicated that it is unclear how the chemical detection system detects the level of mammalian substance on the target area. Again, Claims 1 and 20 state that a first chemical substance on the first sub-area detects a first level of mammalian substances, a second chemical composition on the second sub-area detects a second level of mammalian substance, and (where applicable) a third chemical composition of the third sub-area detects a third level of mammalian substance. Specific means of accomplishing this are described throughout the specification. As explained on p.4 lines 17-26, for instance, each chemical composition may react with a different level of mammalian substance to produce a different color. Different signals (other than color) can also be produced as explained on p.13 line 17 – p.14 line 2.

With respect to Claims 10-19, the Examiner indicated it is unclear how the chemical detection system initiates a signal. However, as explained above, each chemical composition may chemically react with a different level of mammalian substance to initiate a color change and/or other visual or audio signal (p.4 lines 17-26, p.13 line 17 – p.14 line 2).

With respect to Claims 12 and 13, the Examiner indicated it is vague and indefinite how the chemical compositions can initiate a first and a second signal comprising a light or a sound. These principles are explained on p.13 line 17 – p.14 line 2, in a manner which would enable persons skilled in the art to practice the invention.

With respect to Claims 3, 5 and 28, the Examiner indicated it is unclear how the chemical detection system emits a signal. Again, please refer to p.4 lines 17-26, and p.13 line 17 – p.14 line 2. Typically, the signals result from chemical reactions between each chemical composition and a different level of mammalian substance.

With respect to Claims 20-27, the Examiner stated it is unclear whether the chemical compositions detect different levels of mammalian substance or extract. Amended Claim 20 states that different levels of mammalian substance are detected.

With respect to Claim 28, the Examiner indicated it is unclear how the first and second signals can be compared to quantify a level of mammalian substance. This embodiment is explained in detail at p.12 line 24 – p.13 line 17.

Again, Applicants are entitled to claims as broad as the specification and prior art will allow. Claims 1-27 are definite. Applicants request withdrawal of the indefiniteness rejections.

b) Claim Rejections Based on 35 U.S.C. §102

The Examiner rejected Claims 1-11, 14-20, 22-24 and 28 under 35 U.S.C. §102(e) as anticipated by U.S. Publication 2003/0158530 to Diehl et al. This rejection is respectfully traversed.

Diehl et al. discloses a wearable article including a dehydration indicator adapted to measure the ionic strength of urine and correlate it with a level of dehydration. Diehl et al. does not disclose or suggest any other type of indicator.

Applicants' specification describes the detection of mammalian substances based on hydrogen ions and ion aggregates (p.2 lines 8-14). However, this type of detection is not within the scope of Applicants' amended claims. The Markush group in amended Claims 1, 10, 20 and 28 distinguishes the claims over this reference.

The Examiner rejected Claims 10, 12, 13, 21 and 27 under 35 U.S.C. §102(e) as anticipated by U.S. Patent 6,617,488 to Springer et al. This rejection is respectfully traversed.

Springer et al. discloses a method and apparatus for detecting different levels of pH in a wearable article. The reference does not disclose or suggest any other type of indicator.

By definition, the measurement of pH requires determining a concentration of hydrogen ions. As explained above, this type of detection is not within the scope of Applicants' claims. The Markush group in amended Claims 1, 10, 20 and 28 distinguishes the claims over this reference.

c) Claim Rejections Based on 35 U.S.C. §103(a)

The Examiner rejected Claims 25 and 26 under 35 U.S.C. §103(a) as obvious over Diehl et al. in view of the Ponce et al. article entitled "Critical Revision Of Presumptive Tests For Blood Stains," and further in view of U.S. Patent 3,917,452 to Rittersdorf et al. This rejection is respectfully traversed.

The Examiner refers to a disclosure of "Carlucci et al," which is not identified as a basis for the rejection.

As explained above, the disclosure of Diehl et al. is limited to a technique for measuring ionic strength in urine to determine a level of dehydration. No other type of mammalian substance is detected.

Ponce et al. is directed to a semiporous filter paper. This has nothing to do with Applicants' claims, all of which are directed to a wearable article. For instance, there is no suggestion in any of the references to combine the filter paper art with the art directed to wearable articles. Absent such a suggestion, the rejection is based on improper hindsight. The references cannot be combined.

Ponce discloses using a combination of reagents together to detect different levels of blood. However, unlike Applicants' claims, different reagents are not applied to different sub-areas within a target area on the filter paper. The reference does not disclose using different chemical compositions in different sub-areas.

Rittersdorf et al. discloses a test strip for detecting small amounts of blood. However, Rittersdorf et al. provides no motivation to combine Ponce et al.

with Diehl et al. As explained above, Diehl et al. is limited to the detection of ionic strength as a measure of urine dehydration, and is not concerned with the detection of blood. Furthermore, unlike Applicants' claims, Rittersdorf et al. does not disclose different chemical compositions in different sub-areas of the test strip.

Finally, if the references were combined so as to substitute the chemical compositions of Ponce et al. and/or Rittersdorf et al. for those employed by Diehl et al., the dehydration indicator of Diehl et al. would be rendered inoperable for its intended purpose. References cannot be combined in ways which render their teachings inoperable.

For these reasons, Applicants request withdrawal of the claim rejections under 35 U.S.C. §103(a).

d) Conclusion

Applicants believe that the claims, as presented, are in condition for allowance. If the Examiner feels that any issue remains unresolved, then Applicants' attorney respectfully requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,

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